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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Johan Rune

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EXAMINER

DOAN, KIET M

ART UNIT

PAPER NUMBER

2617

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/583,958	<b>Applicant(s)</b> RUNE ET AL.	
	<b>Examiner</b> KIET DOAN	<b>Art Unit</b> 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 42-84 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 42-84 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06/21/06 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/14/08, 07/16/08</u> .                                      | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This Office action is response to Remarks file on 07/11/2008.

Claims 42, 44-82 are amended.

Claims 83-84 are added.

### ***Response to Arguments***

2. Applicant's arguments filed 07/11/2008 have been fully considered but they are not persuasive.

In response to Applicant's argument in claim 42 and 62 that the combination of Chen and Niemela does not teach or suggest "splitting, (within a router) one DCH traffic flow into at least two DCH traffic flows by using an IP multicast protocol" and point to Fig.4 of the present disclosure that the combining/splitting functionalities are move from the RNC into routers within the transport network.

Examiner respectfully disagrees and maintain the combination of Chen and Niemela teach claims 42 and 62 as the claims language and further, Niemela teach "splitting, (within a router) one DCH traffic flow into at least two DCH traffic flows by using an IP multicast protocol" (Abstract, Page 3, lines 17-30, Page 4, lines 20-35 and Page 5. lines 1-21 teach the radio system controlling information transfer wherein contain combining/splitting point that split the information traffic flow into different physical transmission paths. Further, the invention related to macro-diversity/softer handover that allow the mobile device communicates with two sectors formed on the same base station and receiving different pilot signals, that is, the macro-diversity/softer handover is a technique of routing/splitting). Therefore, examiner interpreted "splitting,

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(within a router) one DCH traffic flow into at least two DCH traffic flows by using an IP multicast protocol” as broadest reasonable interpretation and it is proper.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 42-43, 46, 52-54, 56-61, 64, 70-73, 75-84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (US 2003/0161284 A1) in view of Niemela (WO 03/049482 A1).

Consider **claims 42, 60, (81, 82** A computer program...). Chen teaches a router in an Internet Protocol, IP, based UMTS Terrestrial Radio Access Network, UTRAN, Transport Network within a Universal Mobile Telecommunication System (Paragraphs [0016], [0031] teach UMTS system wherein contain radio network controller, IP, node b), the UTRAN transport network carrying Dedicated Channel (DCH) frames on DCHs between a RNC and at least one Node B, the router comprising (Paragraphs [0067-0072], Fig1, Illustrate and teach the connection through UTRAN which involve **routing** through one or more RNC, nobe-B, see paragraph [0007-0008]).

➤ *The examiners also notice Chen teaches soft handover and use Marco-Diversity Combining which technique of routing/splitting.*

Chen teaches claimed limitation as discussed above **but is silent on** means for splitting (within a router) one DCH traffic flow into at least two DCH traffic flows by using an IP multicast protocol.

In an analogous art, Niemela teaches means for splitting one DCH traffic flow into at least two DCH traffic flows by using an IP multicast protocol (Abstract, Page 3, lines 17-28, Fig.1, Illustrate the RNC as combine and splitting traffic to different transmission paths).

Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to modify Chen with Niemela's system, such that router in an IP and base UMTS with UTRAN transport network carries Dedicated Channel (DCH) frames on DCHs and the router enables splitting the traffic to provide means for transferring traffic signals in stability and flexibility with cost effectiveness in using internet multicast protocol.

Consider **claims 43, 61**. Chen teaches the router according to claim 42, wherein the router comprises means for replicating each DCH frame and means for transmitting the replicated DCH frames according to the IP multicast protocol (Paragraphs [0066], [0078-0079] teach transport in cyclic redundancy which read on transmitting the replicated DCH frames).

Consider **claims 46, 64**. Chen teaches the router according to claim 42, wherein each DCH traffic flow is assigned a dedicated multicast destination address in the at least one Node B (Paragraphs [0067]).

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Consider **claims 52, 70**. Chen teaches the router according to claim 42, further comprising:

means for identifying DCH frames belonging to different uplink DCH traffic flows by means of utilization of a multicast address, assigned as the downlink destination address, as a source address of the DCH frames sent in the uplink DCH traffic flows from all participating Node Bs (Paragraphs [0060-0063]).

Consider **claims 53, 72**. Chen teaches the router according to claim 42, further comprising:

means for identifying DCH frames belonging to different uplink DCH traffic flows by retrieving a destination address and the destination port(s) of the uplink flows from the RNC (Paragraphs [0054], [0060-0063]).

Consider **claims 54, 73**. Chen teaches the router according to claim 42, further comprising :

means for identifying DCH frames belonging to different uplink DCH traffic flows by using an uplink flow identity implicit in a downlink DCH traffic flow (Paragraphs [0060-0063]).

Consider claims **56, 77**. The combination of Chen and Niemela teach the router according to claim 42. Further, Niemela teaches wherein the router comprises means for combining at least two uplink DCH traffic flows into one single uplink DCH traffic flow

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(Page 11, lines 1-13).

Consider **claims 57, 78**. The combination of Chen and Niemela teach the router according to claim 56. Further, Chen teaches wherein the means for combining comprises further means for building a new DCH frame from a received set of DCH frames in the at least two uplink DCH traffic flows to be combined, encapsulating the new DCH frame in a UDP packet and sending the UDP IO packet in the uplink direction (Paragraphs [0054], [0060-0063]).

Consider **claims 58, 79**. Chen teaches the router according to claim 57, wherein the means for building the new DCH frame from a received set of DCH frames to be combined further comprises: means for including a selected set of Transport Blocks (TBs) in a payload of the new DCH frame, means for copying the header of the received DCH frames to the new DCH frame; and selecting a Quality Estimate (QE) value for the new DCH frame and, if a payload CRC is used, calculating a payload CRC for the new DCH frame (Paragraphs [0074-0080]).

Consider **claims 59, 80**. Chen teaches the router according to claim 42, further comprising: means for estimating a Latest Accepted Time of Arrival (LAToA) for a next set of DCH frames to be combined having a Connection Frame Number n (CFNn) based on times of arrival of the previous set of frames having a CFN n-1, and means for adjusting the estimates of the LAToA for each new frame adapted to a maximum

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transport delay that a frame can experience under normal circumstances on its path from the at least one Node B to the router (Paragraphs [0063], [0074-0080]).

Consider **claims 71, 75**. Chen teaches the method according to claim 70, comprising:

identifying an originating Node B of an uplink DCH frame, based on a destination IP address and a destination UDP port assigned by the RNC to the Node B for the uplink of the DCH (Paragraph [0048-0049]).

Consider **claims 83 and 84**. Chen teaches the router according to claim 42, wherein the router is in a communication traffic path between the RNC and the at least one Node (Paragraphs [0007-0008], fig.1 show the connection through UTRAN which obvious involve **routing** through one or more RNC, nobe-B)

4. Claims 44-45, 47-51, 55, 62-63, 65-69, 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (US 2003/0161284 A1) in view of Niemela (WO 03/049482 A1) and further view of Haggerty (US 6,331,983).

Consider claims **44, 62**. Chen and Niemela teach the router according to claim 42, **but is silent on** wherein the IP multicast protocol is a Core Based Trees Multicast Routing version 2, CBTv2 protocol.



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In an analogous art, Haggerty teach “Multicast switching”. Further, Haggerty teaches wherein the IP multicast protocol is Core Based Trees Multicast Routing version 2, CBTv2 (Col. 6, lines 53-54)

It would have been obvious to one skilled in the art at the time of the invention was made to modify Chen and Niemela with Haggerty’s system, such that the IP multicast protocol is Core Based Trees Multicast Routing version 2, CBTv2 to provide means for transmit traffic to all member of its destination with the same quality and reliable.

Consider **claims 45, 63**. The combination of Chen and Niemela and Haggerty teach the router according to claim 42. Further, Haggerty teaches wherein the IP multicast protocol is Protocol Independent Multicast-Sparse Mode (PIM-SM) protocol (Col. 6, lines 53-55).

Consider **claims 47, 65**. The combination of Chen and Niemela and Haggerty teach the router according to claim 46. Further, Haggerty teaches wherein the means for splitting further comprises means for identifying a mapping between the RNC and the multicast destination address by using CBTv2 or PIM-SM bootstrap mechanism (Col. 7, lines 45-59, Col. 18, lines 30-35).

Consider **claims 48, 66**. The combination of Chen and Niemela and Haggerty teach the router according to claim 42. Further, Haggerty teaches further comprising

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means for determining whether the router is a splitting and/or combination router by using the protocol(s) CBTv2 and/or MLD, wherein the protocol(s) are/is arranged to determine the number of listeners for a specific multicast destination address (Col.11, lines 45-55, Col.13, lines 56-56).

Consider **claims 49, 67**. The combination of Chen and Niemela and Haggerty teach the router according to claim 42. Further, Haggerty teaches further comprising: means for determining whether the router is a splitting and/or combination router by using protocol(s) PIM-SM and/or MLD wherein the protocol(s) are/is arranged to determine a number of listeners for a specific multicast destination address (Col.11, lines 45-55, Col.18, lines 30-36).

Consider **claims 50, 51, 68, 69**. The combination of Chen and Niemela and Haggerty teach the router according to claim 42. Further, Haggerty teaches further comprising:

means for determining whether the router is a splitting and/or combination router by using the protocol(s) PIM-SM and/or Internet Group Management Protocol, IGMP, wherein the protocol(s) are/is arranged to determine a number of listeners for a specific multicast destination address (Col.11, lines 45-55, Col.4, lines 56-63).

Consider **claims 55, 74**. The combination of Chen and Niemela and Haggerty teach the router according to claim 42. Further, Haggerty teaches wherein the router

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comprises means for identifying DCH frames belonging to different uplink DCH traffic flows by modifying MLD or IGMP protocol and a multicast routing protocol such that a destination port of an uplink is included in messages that are used to build a multicast tree (Col.5, lines 10-34).

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KIET DOAN whose telephone number is (571)272-7863. The examiner can normally be reached on 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Appiah N. Charles can be reached on 571-272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kiet Doan/  
Examiner, Art Unit 2617

/Charles N. Appiah/  
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